SCOPE OF WORKSHOP

Workshop is held so ACE’s are in compliance with the NFRC 708 4.3.2.2 A

• Changes to the NFRC documents

• Periodic Review

• Software Changes

• Additional Supportive CMA Information
Changes to the NFRC Documents

• NFRC 705-2015 CMA PCP
  – No changes

• NFRC 708-2015 CEAP
  – No changes

• NFRC 704-2015 Fee Schedule
  – Limited changes
NFRC 704-2015 Fee Schedule

- NFRC 705 Fees
  - Frame Component Manufacturer – component fees changed
    - Frame Component Manufacturers
      - ≤ $2 million (Small Business Program)
        - Member: $1,500
        - Non-Member: $1,500
      - $2.01 million - 20 million
        - Member: $3,500
        - Non-Member: $4,500
      - >$20.01 million
        - Member: $7,500
        - Non-Member: $8,500
      - Annual Per Frame Component (billed semi-annually)
        - Member: $15
        - Non-Member: $30
  - Spacer Component Manufacturer – component fee changed
    - Spacer Component Manufacturer
      - Annual Participation
        - Member: $3,500
        - Non-Member: $4,500
      - Annual Per Spacer Component (billed semi-annually)
        - Member: $80
        - Non-Member: $130
  - Software Usage Fees – combined all software fees
    - CMA Software Tool (CMAST)
      - Annual License per user
        - Member: $1,000
        - Non-Member: $1,000

Note: Licensed ACE organizations are exempt from CMA Software Tool Fees
ACEs not at ACE Organizations

• Must pay CMAST fees
  – $1000/year

• Must pay Annual Maintenance Fees
  – $150/$200 Member/Nonmember

• Failure complete either of above results in ACE status suspension
**REMINDER: COMPONENT FEES**

- frame components statuses billed:
  - Design, review, redesign, pending, approved, voluntary terminations

- All sizes of spacers are billed
  - not just model

- 6 month minimum charge for all components
CMAST USER FEE CLARIFICATION

- CMAST Fees not required for:
  - NFRC Accredited inspection agencies
  - NFRC Accredited simulation and test labs not associated with ACE Organizations

- Reason: CMAST necessary to perform NFRC CMA work
COMPONENT DEACTIVATION

• Two ways
  • User deletes design status component from client
  • User must notify staff to deactivate all other statuses
• Reminder: 6 month minimum component charge for any uploaded component
TIMING OF NFRC PARTICIPATION AND COMPONENT INVOICES

All Participation, Maintenance/ICEC, and CMAST fees

- January

Component fees

- April 1
- September 1
PERIODIC REVIEW

- NFRC 708, Section 4.3.4:
  
  - Not less than once in two years following approval, but more often if deemed necessary by the APC, NFRC shall conduct a technical evaluation assessment (“Periodic Review”) of each ACE.

- 2014 ACE organizations reviews completed successfully

- Staff will schedule 2015 review as needed.

- Any questions regarding Periodic Review, contact Jen Padgett.
CMAST IMPROVEMENT PROJECT

• NFRC committed $700,000 to make changes

• Project completion is targeted for completion early 2015

• Smart Sync being tested/evaluated by staff now
ISSUE REPORTING PROCEDURE

To report issues with CMA or CMAST, you must go to the website and fill out a “Request for Support” document. Once you’ve done this, you can send to cmasupport@nfrc.org
CODE ENFORCEMENT

• Bid report vs. label certificate
  – Bid report not allowed for final code review

• 2013 Title 24 making specific reference to CMA program

• ASHRAE 90.1 user manual makes mention of CMA
CMA is Code Compliant

• Only NFRC ratings can satisfy IECC and ASHRAE 90.1 requirements
  – NFRC 100 and NFRC 200 references in all commercial energy codes mean CMA ratings comply

• NFRC 100/200 = CMAST ratings on LC
  – Not bid report!
CMA on Large Residential Projects

• CMA cannot be used for residential
  • NFRC 705, section 1.2.2.1 restricts CMA to commercial work
• NFRC 700, section 6, allows residential labeling at site of final assembly
  • May help on large residential projects
2013 INTERCALCULATIONAL ENTITY COMPARISON (ICEC)

• 37 participants

• Report completed
  • APC approved
  • Distributed to ACEs

• Discuss recommendations and final results today
**2013 ICEC Actual Size Results**

<table>
<thead>
<tr>
<th></th>
<th>Actual Size</th>
<th>NFRC Standard Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U-factor</td>
<td>SHGC</td>
</tr>
<tr>
<td>Participant average</td>
<td>0.380</td>
<td>0.312</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.039</td>
<td>0.021</td>
</tr>
<tr>
<td>solution</td>
<td>0.375</td>
<td>0.318</td>
</tr>
</tbody>
</table>

Good NFRC size results, poor actual size results
2013 ICEC-NFRC Sizes

- U-factors within 2 SDs, but several outliers
- SHGCs mostly within 2 SDs, but fewer outliers
## 2013 ICEC versus Historical Simulator ILCs

<table>
<thead>
<tr>
<th></th>
<th>2013 ICEC-Standard Size</th>
<th>2004 to 2012 Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-factor Standard Deviation</td>
<td>0.012</td>
<td>0.012</td>
</tr>
<tr>
<td>SHGC Standard Deviation</td>
<td>0.012</td>
<td>0.010</td>
</tr>
</tbody>
</table>

Good results
2013 ICEC-Actual/Specified Size

- Required assumptions, real world
- Results indicate wide variance
  - Actual size values varied widely
  - 0.04 standard deviation on U-factor
  - 0.02 standard deviation on SHGC
ACTUAL AREA VARIANCE

The graph shows the total area on the y-axis against an unspecified x-axis. The data points are represented by diamonds, indicating variability in the total area across different values.
SPECIFIED SIZE GUIDELINES

• Emulate specified window product(s) while minimizing modelled products
  – One to sixteen window were created per project

• Be consistent with product type
  – Some mixed fixed and curtainwall or window wall
  – Fixed is incorrect
2013 ICEC Actual/Specified Size

• Calculate window area for project
  – Some did two sides
2013 ICEC RECOMMENDATIONS

• Ensure terminated components used appropriately
  – Several failed to use terminated head/sill
2013 ICEC RECOMMENDATIONS

- Generic spacer type must be used if an exact match is not found in CMAST
2013 ICEC Recommendations

• NFRC must consider actual size rules
• CMA Technical TG could pursue
  – Develop guideline document?
2014 ICEC

• Staff will issue this month

• 60 days to complete

• Participation required per NFRC 708
  – Maintain ACE status
  – If at an ACE Organization or not

• Annual Maintenance Fee covers ICEC
  – $150 member/$200 non-member
  – Invoice in January
Thanks for Your Time

Any Questions